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**Southwestern Bell**

**OCT 20 1993**

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

October 20, 1993

**William A. Blase, Jr.**  
Director  
Federal Regulatory

Ex Parte

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Re: CC Docket No. 93-162 -- Special Access  
Interconnection Tariff Investigation

Dear Mr. Caton:

In accordance with Commission rules governing ex parte presentations, please be advised that yesterday, David Ho, Chuck Chiburis, Chris Jines and the undersigned met with Gregory Vogt, Pat Nagle, Chris Frentrup, and Amy Glatter of the Tariff Division to discuss Southwestern Bell's Special Access Expanded Interconnection tariff filing. Because the meeting extended late on October 19, this filing is being made today.

Attached is material distributed in the meeting. It should be noted that the Technical Publication for Collocation is dated June 1993 and is subject to potential future revisions and modifications.

If you have any questions, please let me know.

Sincerely,

*William A. Blase Jr.*

cc: Gregory Vogt  
Pat Nagle  
Chris Frentrup  
Amy Glatter

1667 K Street, N.W.  
Suite 1000  
Washington, DC 20006

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**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

**In the Matter of**

**Local Exchange Carriers' Rates,  
Terms, and Conditions for  
Expanded Interconnection for  
Special Access**

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**CC Docket No. 93-162**

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**SOUTHWESTERN BELL TELEPHONE COMPANY**

**OCTOBER 19, 1993**

**EX PARTE**

## **POINT OF TERMINATION**

- o DEFINITION**
- o APPROPRIATE AND NECESSARY INTERFACE**
- o COLLOCATOR BENEFITS**
- o COLLOCATORS HAVE THE OPTION TO PROVIDE THEIR OWN POINT OF TERMINATION**
- o POINT OF TERMINATION WILL BE INSTALLED EVEN IF COST IS "DISALLOWED"**

## **NONRECURRING CHARGES (NRCs)**

- o NRCs ARE SET AT COST. OTHER COSTS SUCH AS COST OF MONEY OR OVERHEADS ARE NOT INCLUDED.**
- o IF THESE COSTS WERE RECOVERED AS RECURRING RATES SWBT WOULD ALSO RECOVER CAPITAL COSTS, EXPENSES AND OVERHEADS.**
- o SWBT NRCs SIMPLY RECOVER ONLY THE COSTS THAT ARE INCURRED SOLELY AS A RESULT OF INTERCONNECTION AND INTERCONNECTORS.**
- o INTERCONNECTORS SHOULD BE REQUIRED TO PAY IN FULL AND UP FRONT FOR EXPENDITURES INCURRED ON THEIR BEHALF.**
- o LECS ARE REQUIRED TO PHYSICALLY ALTER SELECTED BUILDINGS AND ACQUIRE EQUIPMENT THAT THEY WOULD NOT OTHERWISE PURCHASE.**
- o TENANT ACCOMMODATION CHARGE MERELY RECOVERS THE COST OF MODIFYING BUILDINGS FOR EXPANDED INTERCONNECTION.**

## **COST/OVERHEADS/RATE CONSIDERATIONS**

- o AS REQUESTED BY ALTS, SWBT's INTERCONNECTION RATES REFLECT THE SAME RATIO OF OVERHEAD TO DIRECT COST AS SWBT's OWN SPECIAL ACCESS RATES, e.g. DS1 AND DS3, INCLUDING VOLUME DISCOUNT OFFERINGS.**
- o INCREMENTAL COST STUDY METHODOLOGY WAS USED CONSISTENTLY IN DEVELOPING BOTH INTERCONNECTION COST AND SWBT's DS1 AND DS3 COST.**
- o RATE/COST RELATIONSHIPS FOR SWBT's DS1 and DS3 RATES IS CONSISTENT WITH EXPANDED INTERCONNECTION RATES AND NEED NO FURTHER ADJUSTMENT.**
- o SWBT's PRE RAF RATES ARE CONSISTENT WITH OTHER LECs.**

## **LEC PER DS1 INTERCONNECTION PRICE OUT COMPARISON**

- o THE FOLLOWING COMPARES OTHER LECS' POST-RAF RATES ON A PER DS1 INTERCONNECTION TO PRE-RAF RATES ORIGINALLY FILED BY SWBT. GSF IS INCLUDED IN THESE RATES. UNLESS OTHERWISE STATED, THE RATES INDICATED FOR LECS OTHER THAN SWBT WERE OBTAINED FROM THE DIRECT CASE PRICE OUTS SUBMITTED TO THE COMMISSION ON 8/20/93.**

<u>COMPANY</u>	<u>RAF RATE</u>	
AMERITECH	\$42.94	
BELL ATLANTIC	\$35.82	
BELLSOUTH	\$28.27	
NYNEX	\$30.16	
PACTEL <sup>1</sup>	\$36.98	(per 8/30/93 Telecommu. Report)
SNET	\$56.08	
US WEST	\$50.10	(filed in erratum dated 9/3/93)
 AVERAGE	 _____	
POST RAF RATE	\$40.06	
 SWBT	 \$34.47	PRE-RAF
		(SWBT provides options)
	\$24.77	POST RAF
		(CAP provides options)

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<sup>1</sup> Pactel is of the opinion that 250 not 100 DS1s is the appropriate amount to use in the price out comparison. At 250 DS1s, Pactel's cost is \$21.79 per DS1.

***SOUTHWESTERN BELL***  
***PRICE OUT OF 100 INTERCONNECTED DS1s***  
***RECURRING CHARGES***

	QTY	RATE	TOTAL RATE	COST	TOTAL COST
C.O. FLOOR SPACE**	100	\$157	\$157	\$157	\$157
48 VOLT DC					
POT PWR. ARR.	1	\$122.68	\$122.68	\$49.91	\$49.91
DC PWR	1	\$406.52	\$406.52	\$154.93	\$154.93
DS1 TRANS. ARR.	2	\$16.71	\$33.42	\$7.82	\$15.64
CABLE SPACE					
PER SQUARE FOOT					
PER LINEAR FOOT	75	\$0.16	\$12.00	\$0.14	\$10.50
INTERCONN. X-CONN	100	\$6.83	\$683.00	\$3.56	\$356.00
<b>TOTAL RECURRING W/ O OPTIONS</b>			<b>\$1,415</b>		<b>\$744</b>
SWB POT FRAME OPTION	1	\$39.14	\$39.14	\$16.82	\$16.82
DS1 INTERCON. ARR. OPTION	2	\$115.27	\$230.54	\$54.70	\$109.40
MINUS SWB DS1 TRANS. ARR.	2	(\$16.71)	(\$33.42)	(\$7.82)	(\$15.64)
<b>TOTAL RECURRING W/ OPTIONS</b>			<b>\$1,651</b>		<b>\$855</b>

\*\* ASSUMES RATE EQUALS COST

**SOUTHWESTERN BELL**  
**PRICE OUT OF 100 INTERCONNECTED DSIs**  
**NONRECURRING CHARGES**

	QTY	RATE	TOTAL RATE	COST	TOTAL COST
CONSTRUCTION CHARGES**	1	\$27,051	\$27,051	\$27,051	\$27,051
RANGE		\$13K-\$71K			
CAGE	1	\$5,060	\$5,060	\$5,060	\$5,060
HOUSE ELECT.	1	\$2,207	\$2,207	\$2,207	\$2,207
POT POWER ARR. 40A	1	\$8,139	\$8,139	\$8,139	\$8,139
DS1 TRANS ARR.	2	\$1,258	\$2,516	\$1,258	\$2,516
ENG. DESIGN CHG.	1	\$1,563	\$1,563	\$1,563	\$1,563
CABLE PULL	1	\$106	\$106	\$106	\$106
X-CONNECT - NEW	50	\$125	\$6,250	\$125	\$6,250
RECONFIG. 1ST	1	\$211	\$211	\$211	\$211
RECONFIG. ADD.	49	\$177	\$8,673	\$177	\$8,673
<b>TOTAL NONRECURRING W/O OPTIONS</b>			\$61,776		\$61,776
<b>AMORTIZED 5 YRS @ 11.25%</b>			<b>\$1,351</b>		
SWB POT FRAME OPTION	1	\$2,743	\$2,743	\$2,743	\$2,743
DS1 INTERCON. ARR. OPTION	2	\$10,065	\$20,130	\$10,065	\$20,130
MINUS SWB DS1 TRANS. ARR.	2	(\$1,258)	(\$2,516)	(\$1,258)	(\$2,516)
<b>TOTAL NONRECURRING W/ OPTIONS</b>			\$82,133		\$82,133
<b>NONRECURRING AMORTIZED</b>					
<b>5 YEARS @ 11.25%</b>			<b>\$1,796</b>		

\*\* ONE OFFICE, MEDIUM SIZE, WITH TWO INTERCONNECTORS. THIS IS THE MOST OFTEN FORECASTED SCENARIO FOR TEXAS, WHERE SWB HAD THE MAJORITY OF ITS FORECAST.



**SOUTHWESTERN BELL  
OVERHEAD CONTRIBUTION ANALYSIS**

**FROM SWB PRICE OUT 00F 100 INTERCONNECTED DS1s**

RECURRING CHARGES	TOTAL RATE	TOTAL COST
W/OPTIONS	\$1,651	\$855
W/O OPTIONS	\$1,415	\$744

NONRECURRING CHARGES	TOTAL RATE	TOTAL COST
W/OPTIONS	\$1,796	\$1,796
W/O OPTIONS	\$1,351	\$1,351

TOTAL		
W/OPTIONS	\$3,447	\$2,651
W/O OPTIONS	\$2,765	\$2,095

**OVERHEAD CONTRIBUTION FROM 100 INTERCONNECTED DS1s**

W/OPTIONS (AMOUNT/FACTOR)	\$796	/	1.30
W/O OPTIONS (AMOUNT/FACTOR)	\$671	/	1.32

**OVERHEAD CONTRIBUTION AVAILABLE  
FROM SWB DS1 SERVICE (AVERAGE PER CT)**

TOTAL REVENUE	\$115,980,919
TOTAL COST	\$51,501,386
CONTRIBUTION	\$64,479,533

DEMAND (IN CTs)	271544
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OVERHEAD CONTRIBUTION PER AVERAGE DS1 CT (AMOUNT/FACTOR)	\$237	/	2.25
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## **INSURANCE REQUIREMENTS**

- o SWBT's INSURANCE REQUIREMENT WAS SET AT A+ VII BECAUSE OF THE CONTINUOUS PRESENCE OF COLLOCATORS IN SWBT'S FACILITIES AS CONTRASTED TO OTHER CONTRACTORS.**
  - o The financial size category of VII is the same as the operating practice requirement, as are the limits of liability requirements.**
  - o The alpha rating, however, is higher than listed in the operating practice, based on the nature of the operations conducted in SWBT's facilities.<sup>2</sup>**
- o THE LEAST ACCEPTABLE RATING SHOULD BE A-.**
- o IN ADDITION, SELF INSURANCE IS ACCEPTABLE TO SWBT AS LONG AS THE COLLOCATOR HAS A NET WORTH OF NOT LESS THAN \$10M.**

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<sup>2</sup> This is a clarification of the representation made in SWBT's Direct Case and Rebuttal, where the statements regarding equal application of SWBT requirements refer to the financial size category and the limits of liability, not to the alpha rating.

**EXPANDED  
INTERCONNECTION**

**TECHNICAL  
PUBLICATION**

**FOR  
COLLOCATION**

**WITH  
SOUTHWESTERN BELL  
TELEPHONE COMPANY**

**June 1993**

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# **SECTION 1**

## **EXPANDED INTERCONNECTION DESCRIPTIONS**

- A. PHYSICAL COLLOCATION**
- B. VIRTUAL COLLOCATION**

**SECTION 1.A**

**PHYSICAL COLLOCATION**

## **1.A PHYSICAL COLLOCATION**

**1.A.1 Under physical collocation, the interconnector pays for SWBT central office space in which to locate its own equipment necessary to terminate its transmission links. The interconnector has physical access to the SWBT central office to install, maintain and repair its equipment.**

**1.A.2 The interconnection point(s) will be designated by SWBT and will be accessible by both SWBT and the interconnector on non-discriminatory terms.**

**1.A.3 There are several issues associated with physical collocation which are covered in this publication. Some of these include:**

- **building access and security**
- **security escorts in unsecured central offices**
- **floor space planning and development**
- **cage construction**
- **equipment engineering**

**1.A.4 This publication currently addresses SWBT's physical collocation requirements for interstate special access Expanded Interconnection.**

**SECTION 1.B**  
**VIRTUAL COLLOCATION**



## **1.B VIRTUAL COLLOCATION**

**1.B.1** An interconnector using virtual collocation arrangements will be allowed to designate the transmission equipment dedicated to its use as well as monitor and control its circuits terminating in a SWBT central office. Designated equipment must meet applicable fire and safety codes. An interconnector will be required to bear any additional costs reasonably incurred as a result of the interconnector's choice of equipment. The interconnector will not have access to such equipment within the central office.

**1.B.2** SWBT will install, maintain and repair the interconnector's equipment under the same time intervals and with the same failure rates as comparable SWBT equipment.

**1.B.3** There are several issues associated with virtual collocation which are covered in this publication. Some of these include:

- personnel training on unfamiliar equipment
- floor space planning

**1.B.4** This publication currently addresses SWBT's virtual collocation requirements for interstate special access Expanded Interconnection. These sections are under development.

## **SECTION 2**

# **FLOOR SPACE PLANNING**

## **2. FLOOR SPACE PLANNING**

**2.1 Physical collocation is available on a first-come, first-served basis subject to the availability of space and facilities in each SWBT central office. Virtual collocation is available on the same basis at any SWBT central office where there is not enough available space for physical collocation, but where there is space available for virtual collocation.**

**2.2 In determining the availability of space for collocation, SWBT will take into account its own future needs for space. SWBT will not be required to construct new buildings and/or additions or forgo its own planned use of central office space in order to accommodate interconnectors. SWBT will be required to provide virtual collocation when space for physical collocation is exhausted and must consider interconnector demands for central office space when remodeling or building new central offices.**

**2.3 Partitioned space will be offered in 100 square foot increments. Each interconnector may request either a single 100 square foot partitioned space or several up to a maximum of four (4) partitioned spaces or 400 square feet per SWBT central office. The interconnector must place transmission equipment in the partitioned space within 60 days after it is ready for occupancy or the space will be considered available.**

**2.4 Once SWBT has provided physical collocation in a particular central office, this offering may not be withdrawn for existing interconnectors due to space limitations. However, reasonable restrictions on the warehousing of unused space by an interconnector (e.g. leasing of multiple partitioned spaces when they are not fully equipped) will be monitored by SWBT.**

## **SECTION 3**

### **ENGINEERING**

- A. PHYSICAL COLLOCATION  
EQUIPMENT DESIGN**
- B. VIRTUAL COLLOCATION  
EQUIPMENT DESIGN**
- C. POWER AND GROUNDING**
- D. EXHIBITS**

**ISSUE 1**  
**JUNE 1993**

## **SECTION 3.A**

# **PHYSICAL COLLOCATION** **EQUIPMENT DESIGN**

## **3.A PHYSICAL COLLOCATION EQUIPMENT DESIGN**

### **3.A.1 GENERAL**

**3.A.1.1** SWBT will provide Expanded Interconnection to the following types of Special Access Service and MegaLink Custom Service:

- High Capacity Service (1.544 Mbps)
- MegaLink Custom Service (44.736 Mbps)

**3.A.1.2** SWBT does not assume any responsibility for the design, engineering, testing, or performance of the interconnector's equipment and facilities. However, the interconnector's equipment must meet the same criteria and protection standards as the equipment SWBT utilizes and installs.

**3.A.1.3** The interconnector will be responsible for servicing, supplying, repairing, installing and maintaining the following:

- its fiber optic cable(s) within the partitioned space
- its equipment located in the partitioned space
- required point of termination cross connects
- Point of Termination (POT) frame maintenance, including replacement of fuses and circuit breaker restoration, if POT frame is not provided by SWBT
- the connection cable and associated equipment which may be required within the partitioned space to the POT frame.
- connectorized cross-connected 56 or 84 circuit DSX-1 panels installed in the POT frame if not provided by SWBT

### **3.A.2 OUTSIDE PLANT CONSIDERATIONS**

**3.A.2.1** The interconnector will be responsible for bringing its dielectric fiber optic cable to the central office interconnection point, usually an entrance manhole. The entrance manhole will be designated by SWBT.

**3.A.2.2** Dielectric optical fiber cables manufactured for outside plant use applications have flammable polyethylene sheaths. All cables used in equipment areas must meet the fire resistance requirements outlined in Section 4.3.3.2 (Cable Distribution Assemblies) of TR-EOP-000063, Network Equipment and Building Systems (NEBS) Requirements, or be protected in a manner to ensure they don't pose a potential fire hazard.

**3.A.2.3** To meet fire resistance requirements for bringing polyethylene sheathed fiber cables into equipment areas, a metallic conduit will be installed from the cable vault to the collocation area.

**3.A.2.4** To satisfy the fire resistance requirements, the interconnector-supplied dielectric fiber optic cable will be placed in innerducts within the metallic conduit. With the use of innerduct, the outside diameter of the fiber cable will not exceed .75 inches (OD).

**3.A.2.5** Interconnector employees, agents and contractors will be permitted to have access to the interconnector's cable only at the collocation space (where the cable is exposed for such access and where connections exist or are planned), and outside the entrance manhole (where the cable is delivered to SWBT). Access at any other location within the central office, cable vault, or within the conduit will not be permitted or required.

**3.A.2.6** SWBT will verify that a vacant access sleeve or riser duct exists at the entrance manhole. If none exists, construction of one will be required. If a vacant access sleeve or riser duct does not exist and one has to be constructed solely for the interconnector, the interconnector will pay for the construction on an Individual Case Basis (ICB).

**3.A.2.7** The interconnector will be given the length requirements for the unbroken dielectric cable they must furnish to extend from outside the entrance manhole through the designated path and into the partitioned space. Measurement by SWBT will be made of the route into the entrance manhole from the delivery point, through that manhole, the vault, the non-flammable conduit and into the interconnector's partitioned space. This information will be provided to the interconnector and documented on the "Physical Collocation Application" form, Outside Plant Field Survey.

**3.A.2.8** The interconnector will leave sufficient cable length outside the entrance manhole to allow SWBT to fully extend that cable from outside the entrance manhole, into and through that manhole, into and through the vault and into the partitioned space. Any excess cable will be brought into the interconnector's partitioned space and left as slack for the interconnector to install to its equipment.

**3.A.2.9** On the "Outside Plant Field Survey" portion of the "Physical Collocation Application" form, SWBT will provide to the identified interconnector contact (name and telephone number will be provided on the form) the number of feet of cable required, the date the information was provided to the interconnector contact, and the name of the SWBT Engineer who provided it.

**3.A.2.10** Where available, SWBT will provide two (2) separate points of entry to a central office whenever there are at least two entry points for SWBT cable. In those offices where only one point of entry is used for SWBT's facilities, only one entry point will be provided to an interconnector.

**3.A.2.11** Any request for conduit usage, other than the entrance, will be governed by current conduit leasing/licensing policies and pricing as they are not covered by this tariff offering, as specified in the Expanded Interconnection tariff, FCC No. 73, Section 25.



### **3.A.3 EQUIPMENT ENGINEERING**

**3.A.3.1** Interconnectors will be allowed to collocate equipment needed to terminate basic transmission facilities, including optical terminating equipment and multiplexers within the partitioned space of the central office. SWBT is not required to allow collocation of other types of equipment, i.e. enhanced services, customer premises equipment, or 48 volt DC power equipment.

**3.A.3.2** The interconnector must provide a written technical description of the interconnector-owned and provided transmission equipment to be installed in the specified central office. This information will be furnished as part of the "Physical Collocation Application" form the interconnector will complete. Refer to Exhibit 3.A.3.2-1 for a sample form.

**3.A.3.3** Because of SWBT's central office modernization program and SWBT's move toward shorter equipment framework (which will eliminate the need for ladders), interconnector facilities and equipment located in a central office must not exceed a height of seven feet (7') and must meet the safety requirements as specified by SWBT.

**3.A.3.4** In order to minimize engineering, installation, maintenance, and repair effort and simplify service order procedures associated with physical collocation, a standard equipment layout was developed for interfacing SWBT facilities with interconnector equipment. This design layout approach will enable SWBT and interconnector personnel to recognize the same equipment configuration, regardless of where collocation occurs throughout the SWBT territory.

**3.A.3.5** The standard configuration for every central office (refer to Exhibit 3.A.3.5-1) begins with the installation of a Point of Termination (POT) frame, equipped with connectorized DSX-1 cross-connect panels and/or DSX-3 panels and a 48V DC fuse power panel, inside the partitioned space. The designated point of termination/interface within each central office is the POT frame DSX-1/3 panels.

**NOTE:** A POT frame equipped with Digital Systems Cross-Connect (DSX) panels (a DSX-1/3 appearance for both SWBT and the interconnector for each DS1 and/or DS3 arrangement) and framework drilled for 2 inch (2") standard mounting holes (at the top of the frame to allow installation of a 48V DC power fuse power panel) must be furnished and installed in the interconnector's partitioned space.

**3.A.3.6** The POT frame configuration will provide the interconnector with DC power, central office ground, facility/equipment terminations, visual and audible alarm monitoring, and testing points. Refer to Exhibit 3.A.3.6-1 for a typical POT frame configuration.

**3.A.3.7** The POT frame DSX-1/3 cross connect panels provide the physical demarcation (network point of termination) between the interconnector's maintenance and ownership responsibility and SWBT's maintenance and ownership responsibility.

**3.A.3.8** Dedicated cables (connectorized shielded cable for DS1 and coaxial cable for DS3) will be furnished and installed from SWBT's DSX-1/3 panels in SWBT's DSX-1/3 frames to the POT frame, based on the annual forecast of DS1/DS3 circuits furnished by the interconnector. This will enable the interconnector to add additional DS1/DS3 service without additional cable work by SWBT and simplify service order, record keeping and problem resolution activities.